

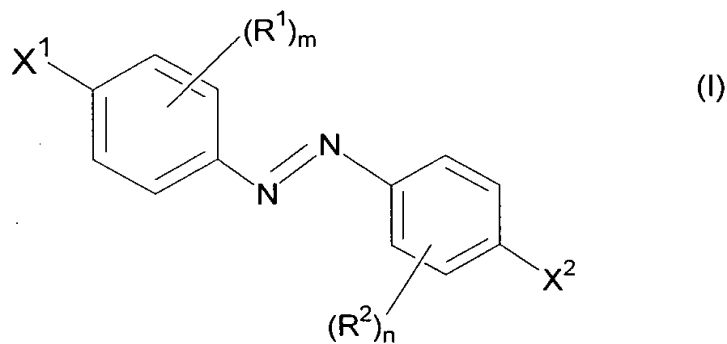
AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing Of Claims:

Claims 1 - 21. (Cancelled)

Claim 22. (New) A method of using a recording material for a holographic volume storage medium containing at least one dye which changes its spatial arrangement when a hologram is recorded and optionally at least one shape –anisotropic grouping, where the dye permits the recording of at least three holograms at one specimen position , with the proviso that the recording material has an irradiated



thickness of 1.0 mm to 5 cm. and at least one dye has an absorption maximum of the $\pi\pi^*$ band that is less than or equal to 400 nm and the dye conforming structurally to formula (I)

wherein

R^1 and R^2 each independently of the other represents hydrogen or a non ionic substituent, and

R^1 may additionally represent $-X^{1'}-R^3$,

m and n each independently of the other represents an integer from 0 to 4,

X^1 and X^2 represent $-X^{1'}-R^3$ and $X^{2'}-R^4$, respectively, and

$X^{1'}$ and $X^{2'}$ represent a direct bond, $-O-$, $-S-$, $-(N-R^5)-$, $-C(R^6R^7)-$, $-(C=O)-$, $-(CO-O)-$, $-(CO-NR^5)-$, $-(SO_2)-$, $-(SO_2-O)-$, $-(SO_2-NR^5)-$, $-(C=NR^8)-$ or $-(CNR^8-NR^5)-$,

R^3 , R^4 , R^5 and R^8 each independently of the others represents hydrogen, C_1- to $C_{20}-$ alkyl, C_3- to $C_{10}-$ cycloalkyl, C_2- to $C_{20}-$ alkenyl, C_6- to $C_{10}-$ aryl, C_1- to $C_{20}-$ alkyl- $(C=O)-$, C_3- to $C_{10}-$ cycloalkyl- $(C=O)-$, C_2- to $C_{20}-$ alkenyl- $(C=O)-$, C_6- to $C_{10}-$ aryl- $(C=O)-$, C_1- to $C_{20}-$ alkyl- $(SO_2)-$, C_3- to $C_{10}-$ cycloalkyl- $(SO_2)-$, C_2- to $C_{20}-$ alkenyl- $(SO_2)-$ or C_6- to $C_{10}-$ aryl- $(SO_2)-$, or

$X^{1'}-R^3$ and $X^{2'}-R^4$ may represent hydrogen, halogen, cyano, nitro, CF_3 or CCl_3 ,

R^6 and R^7 each independently of the other represents hydrogen, halogen, C_1- to $C_{20}-$ alkyl, C_1- to $C_{20}-$ alkoxy, C_3- to $C_{10}-$ cycloalkyl, C_2- to $C_{20}-$ alkenyl or C_6- to $C_{10}-$ aryl.

Claim 23. (New) The method of Claim 22 further comprising angle-dependent reading of a volume hologram.